

Machine Gun

Operator's Manual

MG 3

Cal. 7.62 mm x 51



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1. Important Information

- 1.1** Every MG must be regarded as loaded until the gunner has convinced himself that no round has been left in the chamber of the barrel.

For this purpose:

Cock bolt and push safety catch into "S" position (see also 5.2).

Open cover, and turn feed tray upwards.

Ensure that barrel is clear (see also 5.2).

- 1.2** If round fails to ignite in barrel which is fired hot, only cock bolt after time allowed for cook-off has elapsed (approx. 5 minutes).

- 1.3** Change barrel after approx. 150 rounds (see also 5.3).

- 1.4** Releasing the bolt with no barrel in the weapon is prohibited.

- 1.5** Clean barrel before each firing.

- 1.6** Make it a rule thoroughly to clean the weapon after each use.

2. Technical Data

2.1 General

Calibre	7.62 mm x 51
Weapon System	Recoil loader with moving barrel
Ammunition feed	from L/H side
Muzzle velocity	820 m/s
Rate of fire	from 1,000 to 1,300 rds/min
Bolt locking	locking roll system
Types of fire	burst and sustained fire
Muzzle energy	3,200 Nm
Sighting system	open system with front and back sight, adjustable from 200 m up to 1,200 m in 100 m increments
	AA sight for air targets at speeds from 100 m/s up to 250 m/s
Max. range	approx. 4,000 m
Combating range	approx. 1,200 m

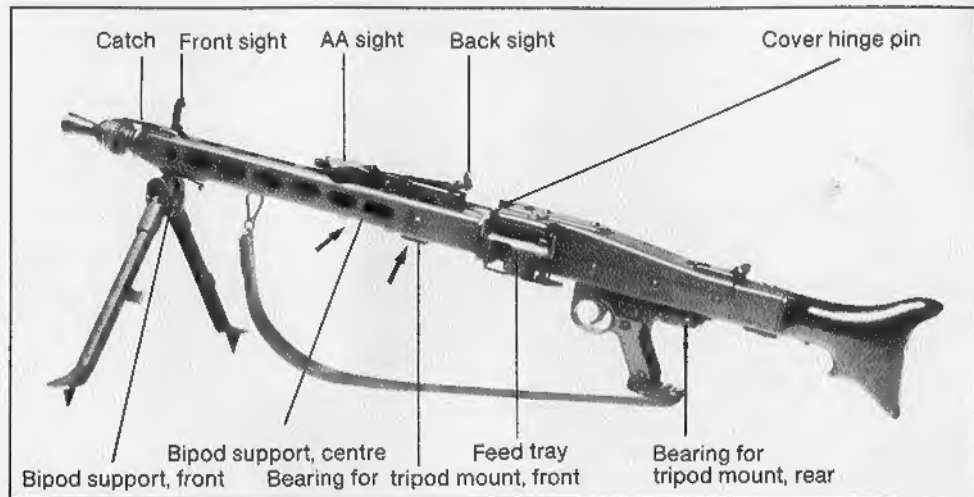
2.2 Dimensions

Length of MG with butt	1,225 mm
Width of MG	130 mm
Height of MG with sights up	215 mm
Type of twist	constant, R/H
Firing height from bipod	300 mm

2.3 Weights

MG with bipod and sling	11.9 kg
MG without bipod and sling	10.0 kg

3. Overall view



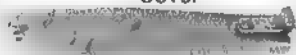


4. Weapon, dismantled

4.1 Sub-Assemblies



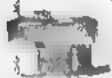
Cover



Cocking slide



Feed tray



Bolt



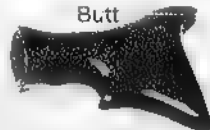
Recoil spring



Rear cover



Butt



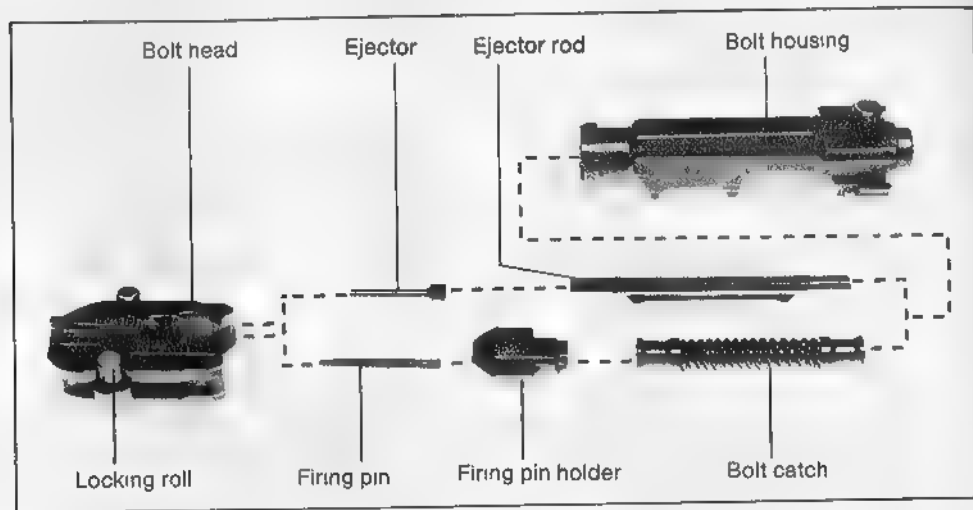
Cover hinge pin



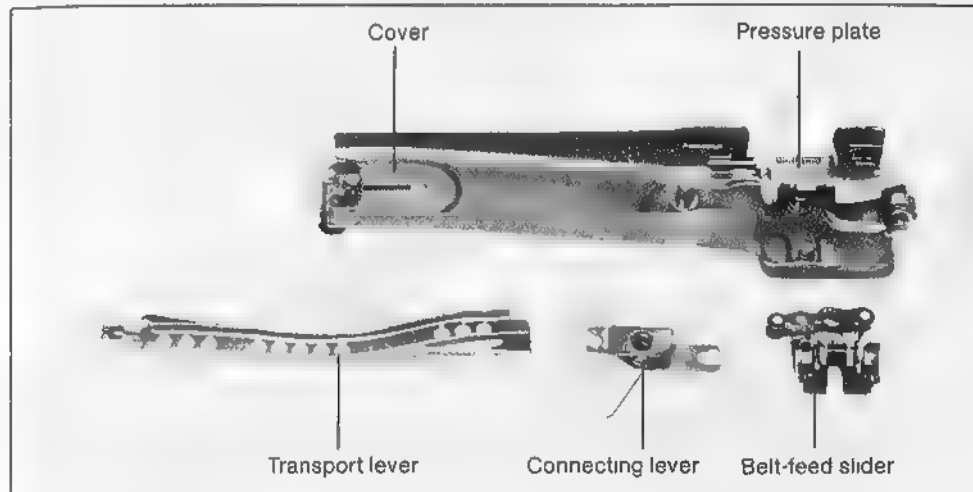
Sling



4.2 Bolt – Parts of

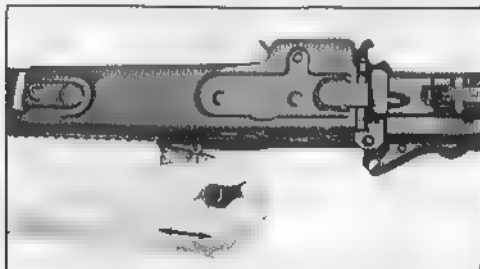


4.3 Cover – Parts of



5. Handling and Operation

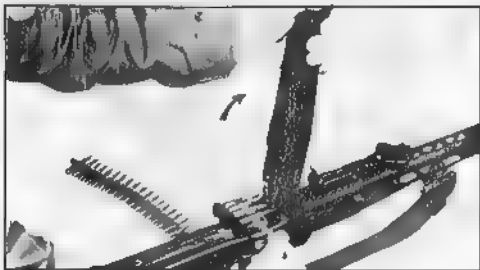
5.1 Ensuring Readiness for Firing



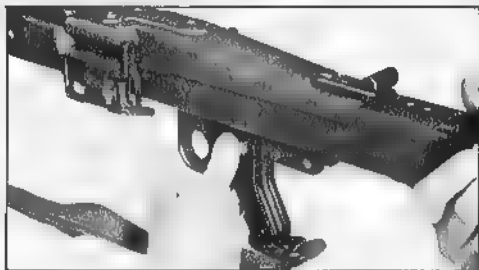
Cock bolt (Retract cocking slide and push forward)



Push safety catch into "S" position

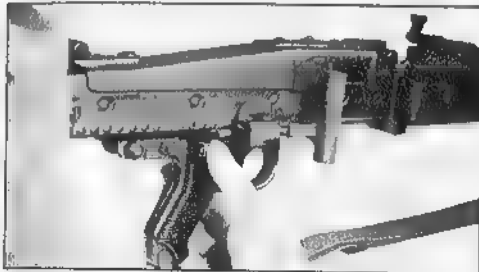


Load belt

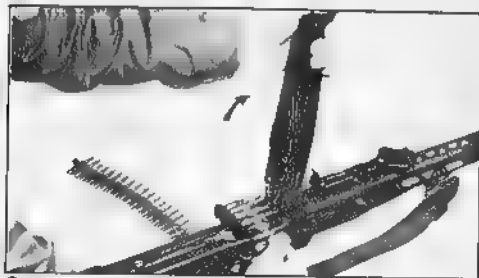


Move safety catch into "F" position

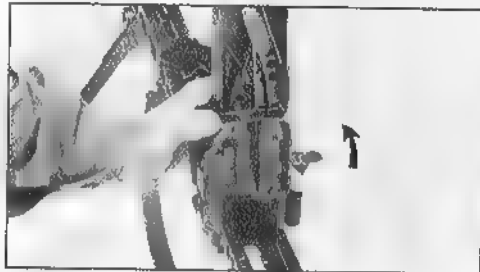
5.2 Cancelling Readiness for Firing



Push safety catch into "S" position



Open cover Remove belt

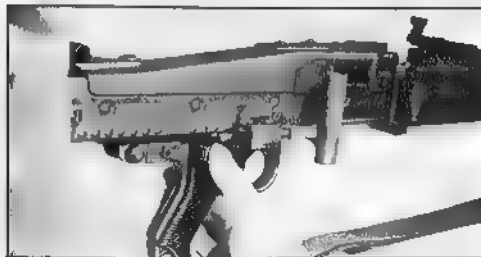


Turn feed tray upwards
Ensure that barrel is clear

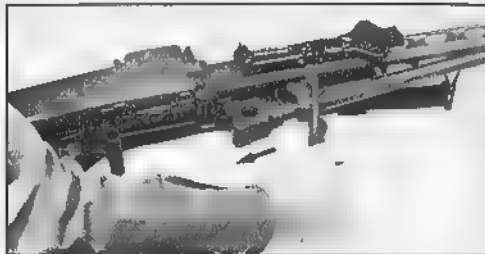


Grip cocking slide, and allow bolt
to advance slowly

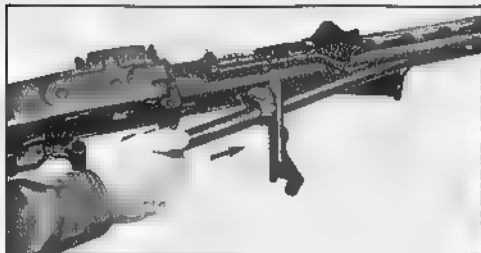
5.3 Changing of Barrel



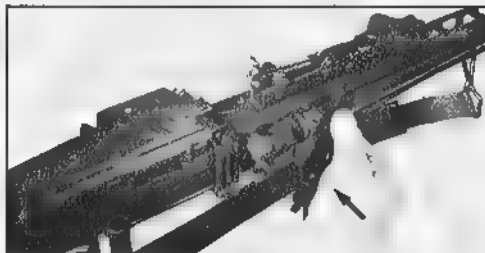
Cock bolt, and push safety catch into "S" position



Open barrel change flap Remove barrel

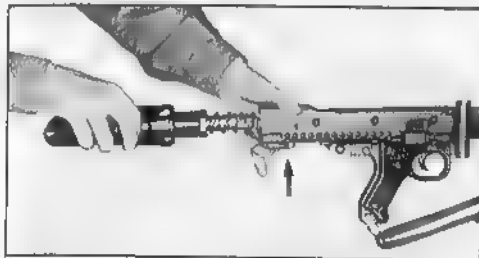


Insert spare barrel

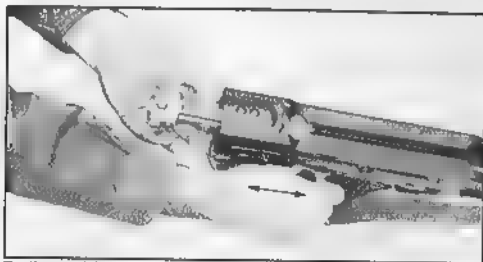


Close barrel change flap

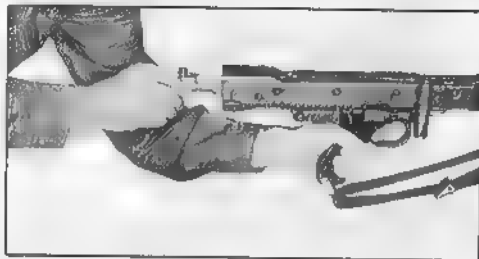
5.4 Changing of Bolt



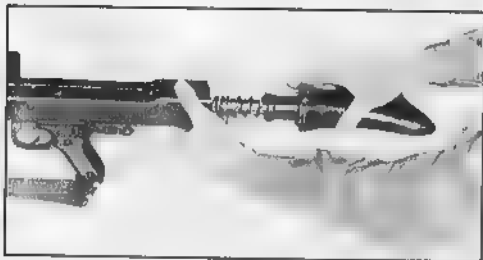
Open cover. Depress rear cover catch. Rotate butt with rear cover through 90° anti-clockwise, and take off together with recoil spring.



Pull cocking slide into rearmost position. Catch bolt. Return cocking slide into foremost position.



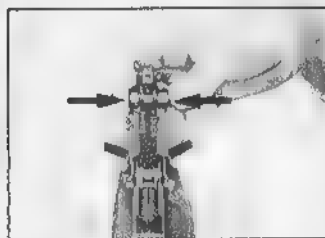
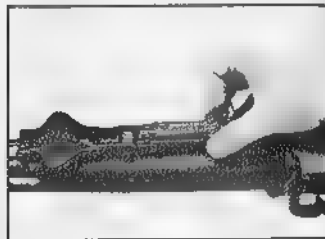
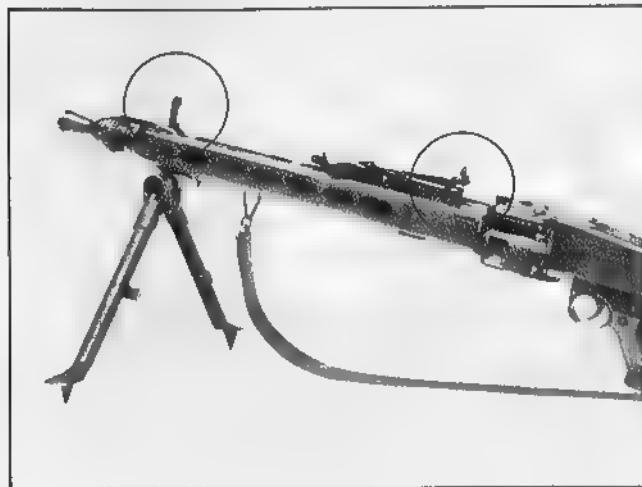
Insert spare bolt into slide rails and whilst doing this, actuate trigger.



Refit butt with rear cover and recoil spring, and close cover.

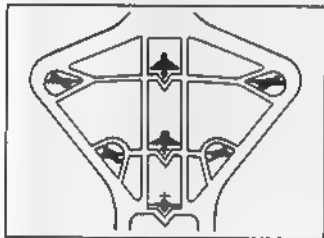
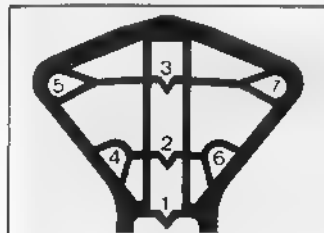
5.5 Sighting Devices

5.5.1 Sight Adjustment for Combating Ground Targets



Setting of target range

5.5 2. Combating of Air Targets



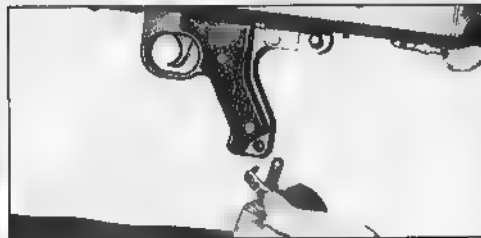
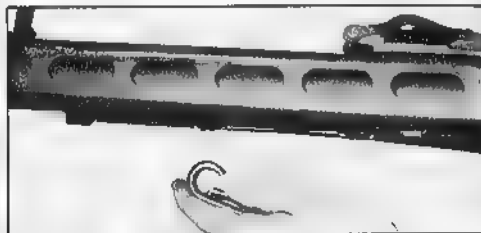
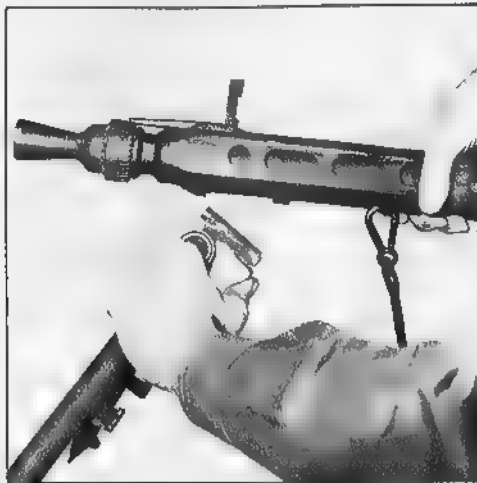
Aiming Positions for Air Target Combating

Target Attitude	Target speed $V = 100$ m/s (Propeller Aircraft)	Target speed $V = 250$ m/s (Jet Aircraft)
Direct approach	1 i.e. Notch for direct approach on lower sighting bar	
Crossover flight	2 i.e. Crossover notch of centre sighting bar	3 i.e. Crossover notch of upper sighting bar
Passing flight. Target passing on L/H side of gun	4 i.e. L/H passing flight aiming mark of centre sighting bar	5 i.e. L/H passing flight aiming mark of upper sighting bar
Passing flight. Target passing on R/H side of gun	6 i.e. R/H passing flight aiming mark of centre sighting bar	7 i.e. R/H passing flight aiming mark of upper sighting bar

6. Dismantling into Sub-Assemblies

6.1 Bipod

6.2 Sling



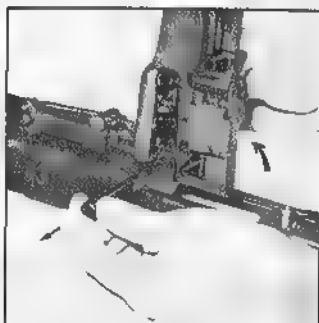
6.3 Feed Mechanism



Actuate cover catch

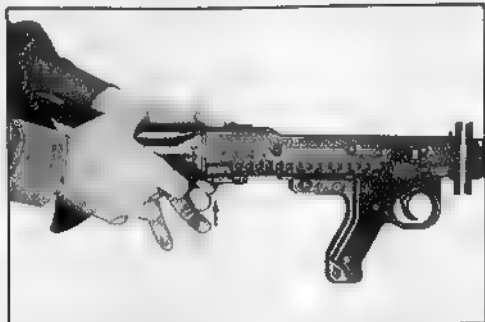


Open cover



Turn feed tray upwards,
and pull out cover hinge pin

6.4 Butt with Rear Cover and Recoil Spring

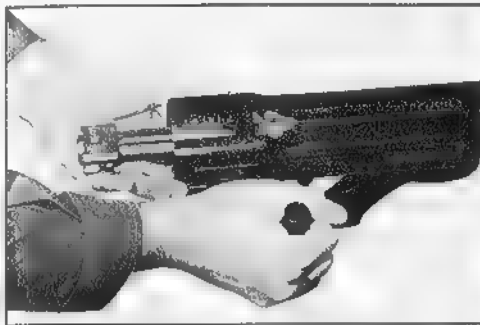


Depress rear cover catch. Rotate butt together with rear cover through 90°, anti-clockwise

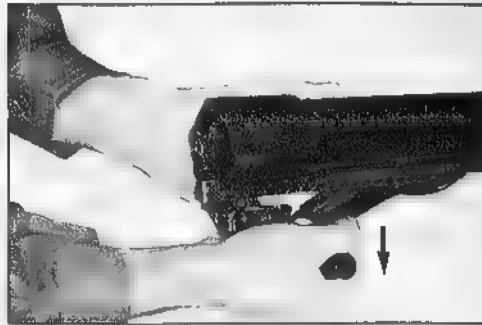


Remove butt together with rear cover and recoil spring
(ATTENTION – Spring is still compressed!)

6.5 Bolt
6.6 Cocking Slide

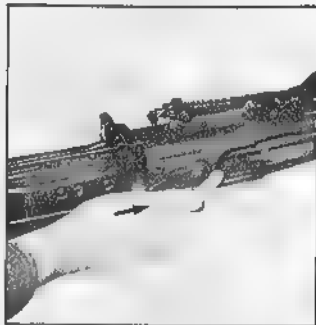


Retract cocking slide, and catch bolt

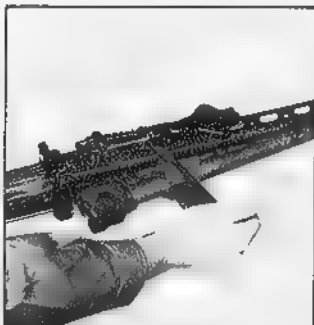


Swing cocking handle forward until catch disengages. Then pull back cocking slide, tilt downwards, and remove

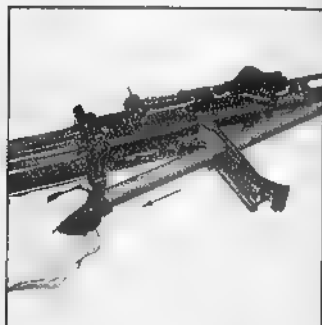
6.7 Barrel



Unlatch barrel change flap

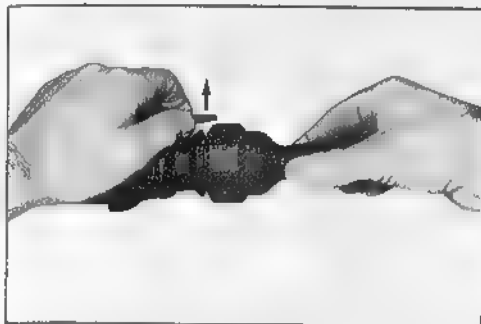


Open barrel change flap

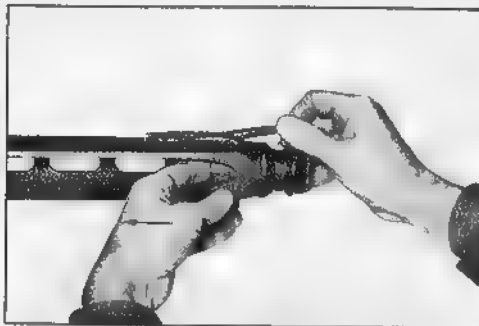


Remove barrel

6.8 Recoil Booster
6.9 Barrel Guide Sleeve

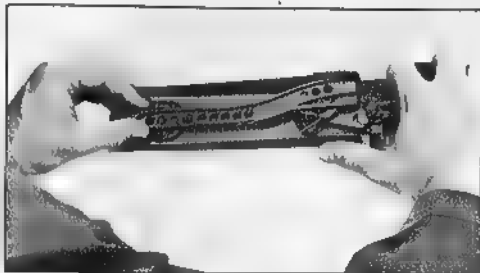


Lift up catch, and unscrew recoil booster

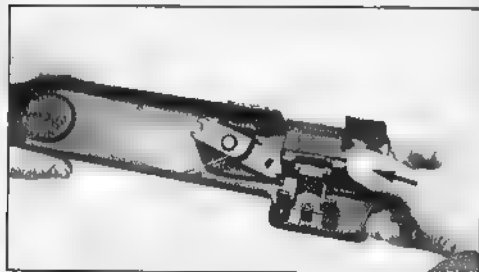


Lift up catch. Insert finger into barrel guide sleeve and, along large opening in housing, slide back as far as to barrel change flap, and remove barrel guide sleeve.

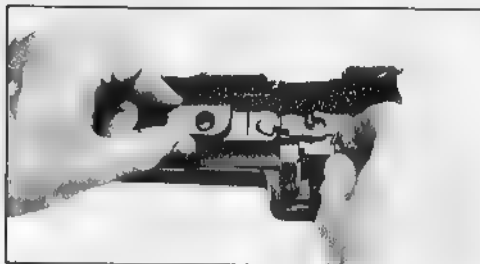
6.10 Cover - Parts of



Depress retaining spring of transport lever, lift up transport lever, and remove



Depress pressure plate, and push in direction of arrow

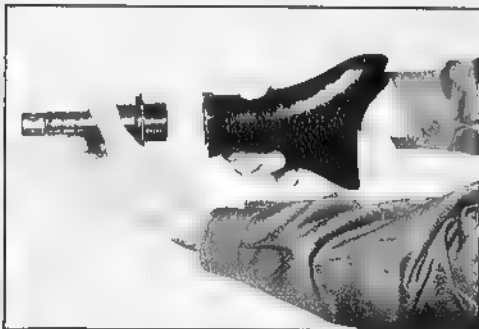


Lift out connecting lever together with belt feed slide

6.11 Butt with Rear Cover

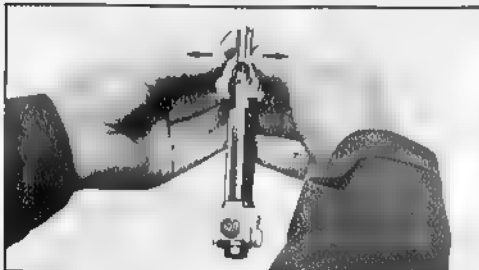


Depress thrust bolt, and rotate rear cover through 45°, either clockwise or anti-clockwise

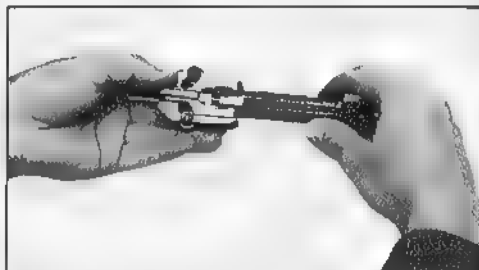


Take off rear cover

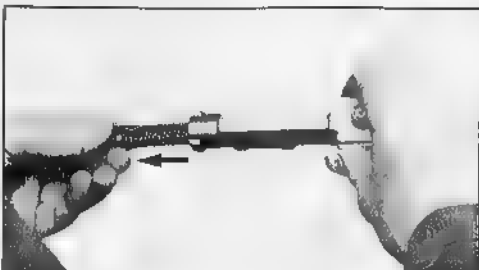
6.12 Bolt – Parts of



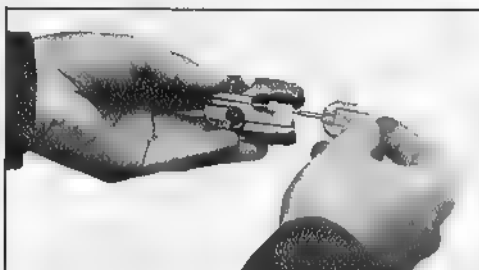
Pull locking rolls outwards



Rotate bolt housing anti-clockwise through 90°, and remove



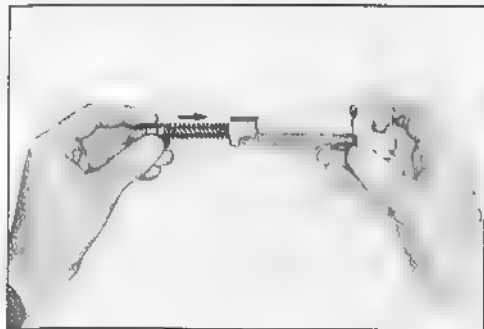
Remove ejector rod and bolt catch



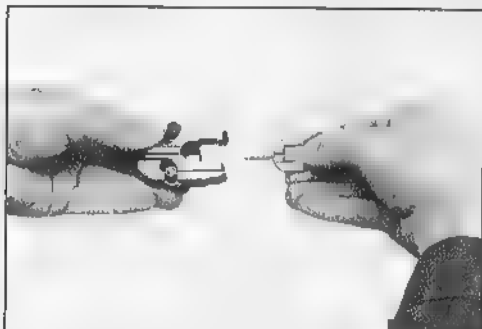
Remove from bolt head. firing pin holder, firing pin, and ejector

7. Reassembly of Sub-Assemblies

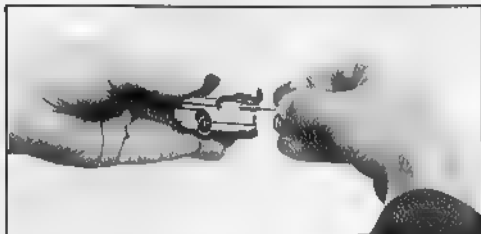
7.1 Bolt - Parts of



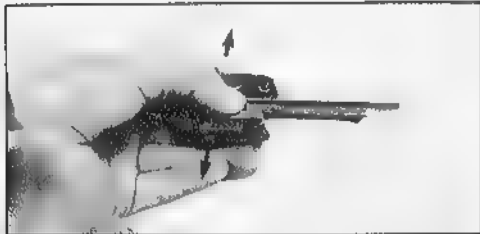
Place bolt catch in bolt housing



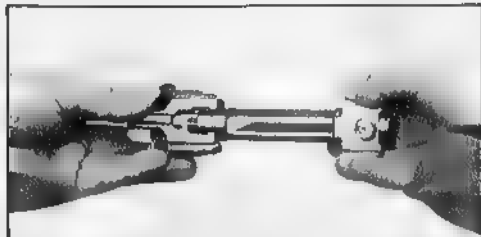
Insert firing pin into firing pin holder,
and fit in bolt head
The flat side of the firing pin holder
must point upwards



Refit ejector



Push locking rolls outwards, and keep in that position. Lay ejector rod onto firing pin holder, and prevent from shifting

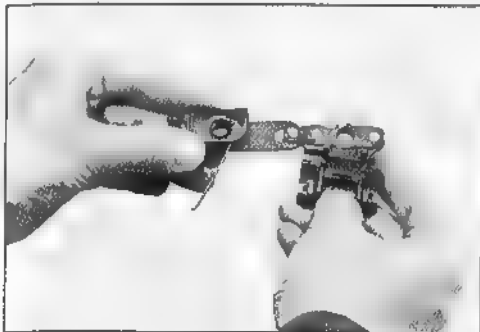


Push bolt housing over ejector rod until it bottoms. Then rotate bolt housing clockwise through 90°.

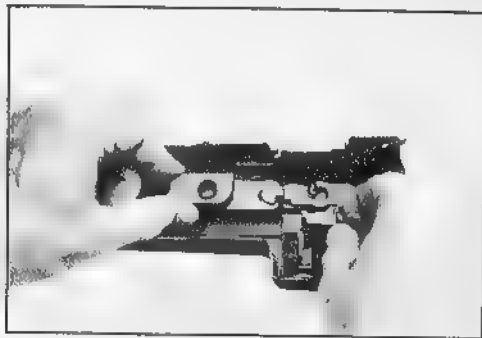


Force locking rolls inwards

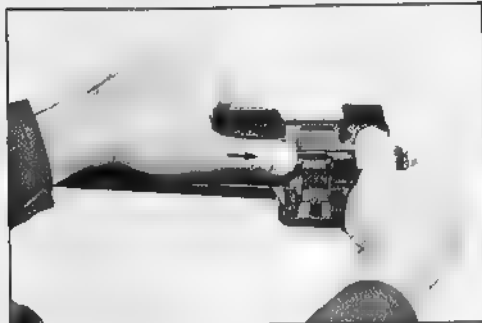
7.2 Cover - Parts of



Plug connecting lever into belt feed slide



Lift up pressure plate spring, and simultaneously seat connecting lever and belt feed slide onto pivot pins



Depress pressure plate and push in direction of arrow

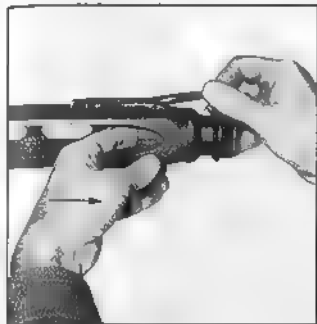


Push sliding roll of transport lever into fork of connecting lever
Then place onto pivot pin, with retaining spring compressed Retaining spring must engage.

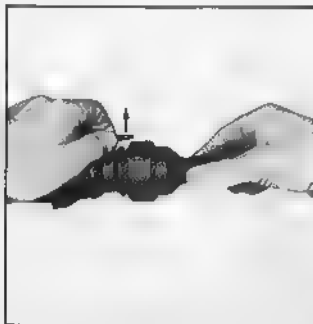
7.3 Barrel Guide Sleeve

7.4 Recoil Booster

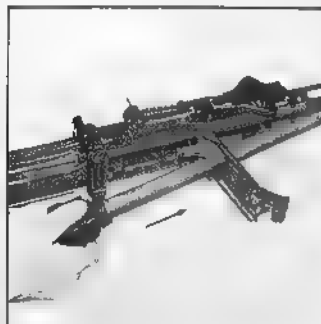
7.5 Barrel



Refit barrel guide sleeve,
reversing operation explained
under 6.9

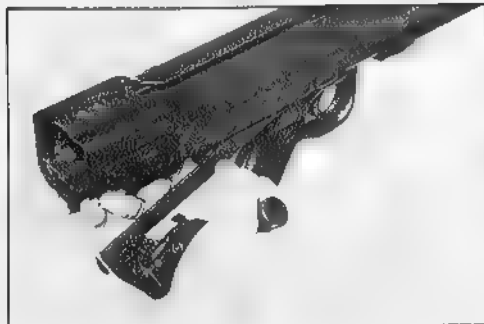


Refit recoil booster,
reversing operation explained
under 6.8

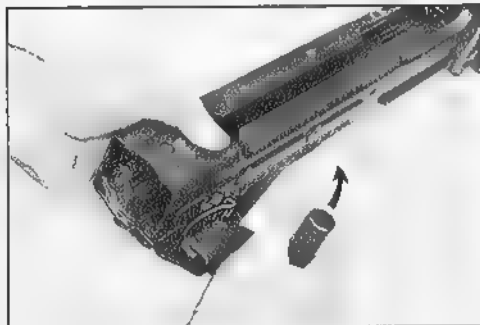


Refit barrel, reversing
operation explained
under 6.7

7.6 Cocking Slide



Seat cocking slide in guide rails

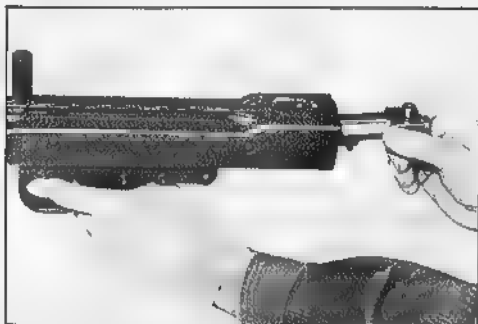


Swing back cocking handle, and push cocking slide forward

7.7 Bolt

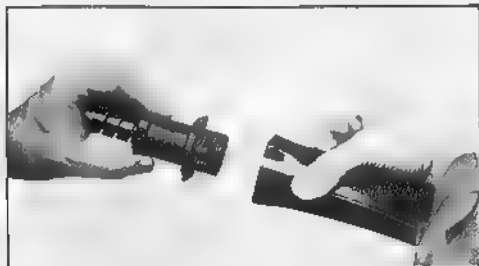


Force locking rolls inwards



Insert bolt, and push forward,
at the same time actuating the trigger

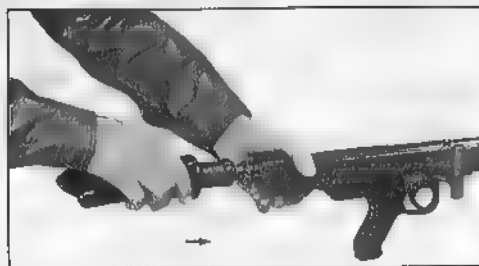
7.8 Butt with Rear Cover and Recoil Spring



Push rear cover into butt



Rotate butt through 45°

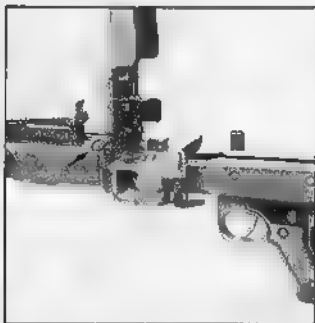


Insert butt with rear cover and spring into weapon housing, and rotate clockwise through 90°

7.9 Cover with Feed Tray



Insert cover together with feed tray into hinge, with the multiple-disc brake engaging its groove



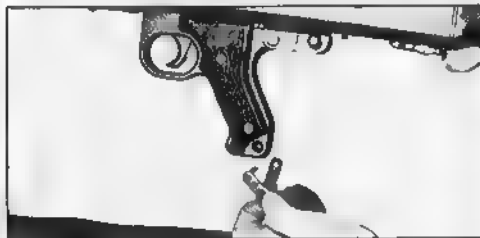
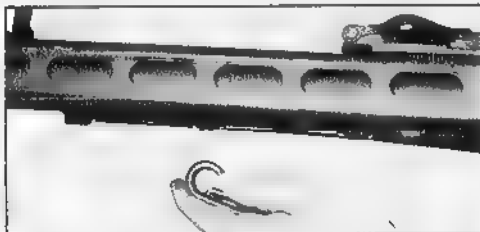
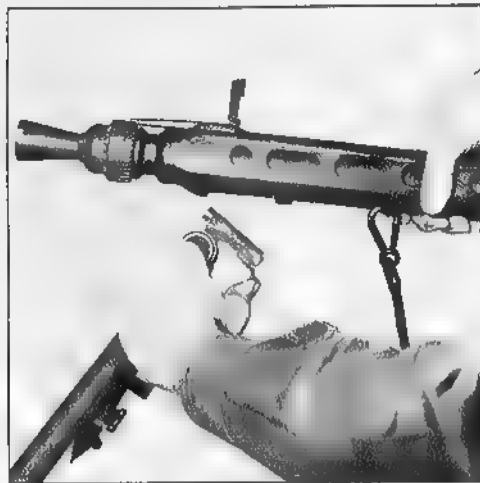
Insert hinge pin from left side, with flat side of knurled collar pointing downwards



Push in hinge pin until it bottoms, and close cover

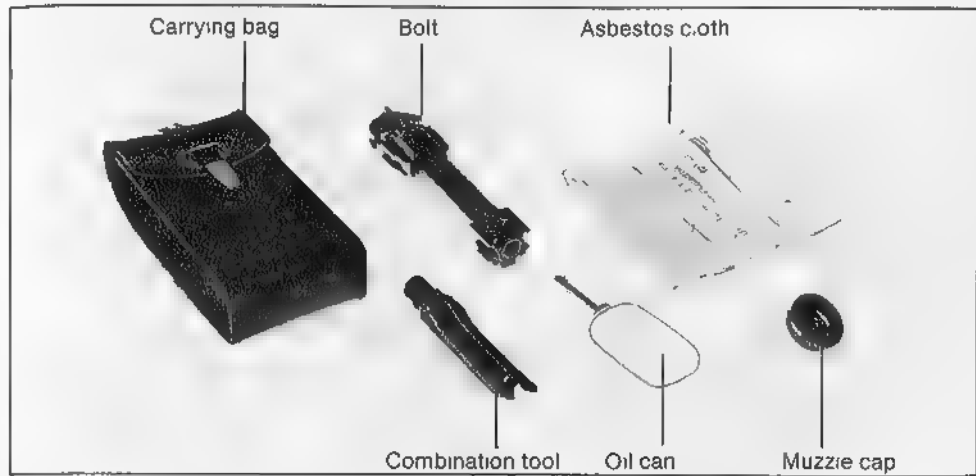
7.10 Bipod

7.11 Sling

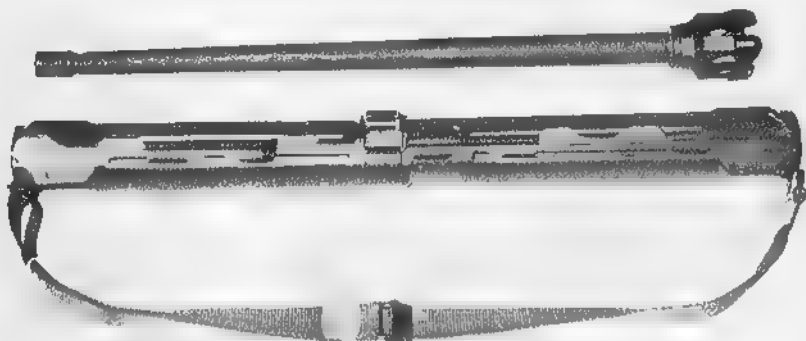


8. Accessories

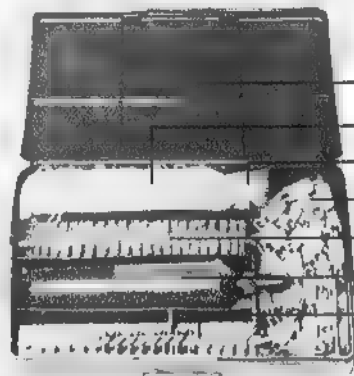
8.1 Carrying Bag with Contents



8.2 Container with Spare Barrel



8.3 Cleaning Kit



Container

Cleaning wick

Dusting brush

Cleaning chain

Oiling brush

Oil cylinder

Cleaning brush

9. Trouble Shooting

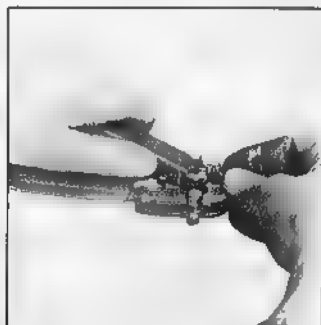
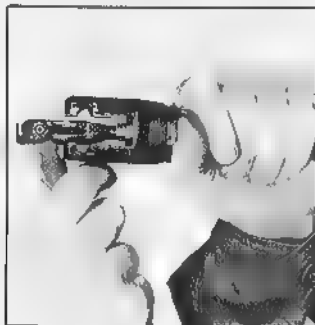
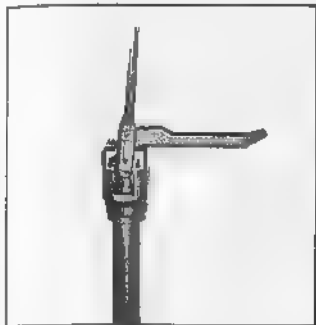
Nature of Trouble	Cause of Trouble	Remedy
9 1 Weapon fails to fire	Trigger on "Safe"	Push safety catch into "F" position
	Ammunition belt incorrectly loaded	Load ammunition belt with belt links upwards
	Defective ammunition	Reload, and actuate trigger again
	Defective bolt	Replace bolt
9 2 Non-intended interruption of fire	Defective ammunition	Reload and actuate trigger again
	Belt jammed	Eliminate obstruction
	Defective bolt	Replace bolt
	Cartridge case ejection trouble	Remove jammed cartridge case, reload, and actuate trigger again
	Flange on cartridge case base broken away, or cartridge case torn into pieces	Change barrel. Remove cartridge case fragment, using combination tool

10. Use of Combination Tool

10.1 Removal of Cartridge Cases

10.2 Removal of Cartridge Case Fragments

10.3 Replacing of Extractor



11. Maintenance and Cleaning

- Proper maintenance and cleaning are pre-requisites for proper functioning.
- Weapon must not be heavily bumped onto ground.
- Close dust cover when transporting weapon.
- Do not lean weapon against walls in order to avoid entry of foreign particles into barrel.
- Make it a rule to clean the weapon after each use.
- Cleaning brush (with brass wire bristles) to be used for weapon cleaning oil only.
- Oil brush (with hair bristles) to be used for weapon lubricating oil only.
- Clean barrel each time before firing.
- Clean and oil barrel after each firing.
- After cleaning and re-assembly check weapon for free movement and proper functioning of all parts.

12. Firing Positions



13. Carrying Modes





RHEINMETALL
International S.A.

100, Boulevard du Souverain, B-1170 Brussels
Telephone 02-660 50 88, Telex 23 127 rhint b